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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,127	12/30/2003	Marco Ronchi	SCH041BUS/BF/jf (2110-98-	3289
996	7590	11/13/2008	EXAMINER	
GRAYBEAL JACKSON LLP 155 - 108TH AVENUE NE SUITE 350 BELLEVUE, WA 98004-5973			COLE, BRANDON S	
			ART UNIT	PAPER NUMBER
			2816	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/749,127	<b>Applicant(s)</b> RONCHI ET AL.	
	<b>Examiner</b> BRANDON S. COLE	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on August 26<sup>th</sup> 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-26 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16, 18-26 and 31 is/are allowed.
- 6) ☒ Claim(s) 28-30 is/are rejected.
- 7) ☒ Claim(s) 1-16 and 28 - 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 30<sup>th</sup> 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is made FINAL in response to the amendments filed on 8/26/2008.

#### ***Response to Amendment***

2. The amendment filed on 8/26/08 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: “the noisy digital input signals having a substantially constant frequency” recited in claim 28.

Applicant is required to cancel the new matter in the reply to this Office Action.

#### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: bias terminal TP.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Ipolar.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

4. Claims 1- 16 and 28 - 31 are objected to because of the following informalities:

In Claim 1, lines 6-7, "an hysteresis comparator" should be changed to -- a hysteresis comparator --.

In Claim 1, line 7, "in turn" should be deleted.

In Claim 1, line 13, "said bias terminal" should be changed to -- a bias terminal --.

In Claim 1, line 19, "." should be deleted.

In Claim 2, line 1, "claim 4" should be changed to --claim 1--.

Claim 3 is objected to because they include the minor informalities of claim 2.

In Claim 4, lines 6 - 7, "an hysteresis comparator" should be changed to -- a hysteresis comparator --.

Claims 5 – 16 are objected to because they include the minor informalities of claim 4.

In claim 28, lines 1-2, "reducing the noise on digital input signal which may contain noise" should be changed to -- reducing noise on noisy digital input signals --.

Claim 28, line 3, "reducing noisy" should be changed to -- reducing the noisy--.

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Claims 29 and 30 are rejected to because they include the minor informalities of claim 28.

In Claim 31, line 5, "an hysteresis comparator" should be changed to -- a hysteresis comparator --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 28-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. More specifically, the newly added limitation "the noisy digital input signals having a substantially constant frequency" recited in claim 28 is not support by the original specification, and thus the above limitation introduce new matter to the claims 28-30.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al (US 4,672,236) in view of Ricon-Mora (US 6,229,350).

As to claim 28, Toda et al figure 1 shows a method of reducing the noise on input signals (20) which may contain noise, the method comprising: receiving the noisy input signals; generating a plurality of mirrored currents in response to the received noisy digital input signals (a conventional operational amplifier is made up of current mirrors. (Operational Amplifiers)); converting at least one of the mirrored currents into a corresponding intermediate voltage signal; generating a trigger signal having a desired hysteresis (21,22,23) in response to the intermediate voltage signal; and reducing the voltage levels of the noisy input signals (22,23) to appropriate voltage levels prior to the operations of generating and converting.

Toda et al fails to show that the input signals of the hysteresis circuit are digital.

However, Ricon-Mora teaches in column 2 lines 39 – 45 that it is known that hysteresis circuit can have a digital input.

Therefore, it would have been obvious for one having ordinary skill in the art, at the time of the invention to have Toda et al's hysteresis circuit replaced by Ricon-Mora hysteresis circuit for the purpose of yielding high speed accuracy.

As to claim 29, Toda et al figure 1 shows the method of claim 28 further comprising adjusting a hysteresis (21,22, 23) of the intermediate voltage signal in response to a bias current.

7. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al (US 4,672,236) in view of Ricon-Mora (US 6,229,350) as applied to claim 28, in further view of Pioppo et al (US 6,269,388).

Toda et al figure 1 shows a method that produces a trigger signal (21, 22, 23) having a substantially square wave voltage as a function of time and an intermediate voltage signal.

Toda et al fails to show a method that produces an intermediate voltage signal ( $V_c$ ) that is trapezoidal voltage as a function of time

However, Pioppo figure 3 shows a method that produces an intermediate voltage signal ( $V_c$ ) that is trapezoidal voltage as a function of time and the trigger signal have a substantially square wave voltage as a function of time. Pioppo teaches in column 2, lines 16-31 that the advantage for generating a trapezoidal signal is that it can be precisely amplitude-modulated and highly reliable.

Therefore it would have been obvious for one having ordinary skill in the art, at the time of invention, to replace Toda et al's immediate voltage signal with Pioppo's immediate voltage signal for the purpose of having a signal that can be precisely amplitude-modulated and highly reliable.

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***Response to Arguments***

8. Applicant's arguments filed 8/26/2008 have been fully considered but they are not persuasive. In claim 28 the recitation "the noisy digital input signals having a substantially constant frequency" is new matter which is not taught in the specification, therefore not patentable weight can be given to the above limitation.

Ricon-Mora teaches in column, lines 39 – 45 that it is known that hysteresis circuit can have a digital input therefore the hysteresis having a digital input limitation is met.

***Allowable Subject Matter***

9. Claims 1 – 16 and 31 would be allowed if applicant overcomes the claim objections.

Claims 18 – 26 are allowed.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON S. COLE whose telephone number is (571)270-5075. The examiner can normally be reached on Mon - Fri 7:30-5:00 EST (Alternate Friday's Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Long Nguyen/  
Primary Examiner, Art Unit 2816

/Brandon S Cole/  
Examiner, Art Unit 2816